

REMARKS

Upon entry of the present amendment, claims 117-226 will be pending and under examination (claims 1-116 having been canceled and new claims 117-226 added). The new claim are supported by the specification and claims as originally filed. No new matter has been added.

Restriction Requirement and Species Election

The Examiner notes Applicants' election of Group IV in Applicants' response filed April 26, 2005. The new claims are directed to libraries, all of which fall within the subject matter of Group IV. Thus, Applicants request that the Examiner examine all of the pending claims.

Applicants also thank the Examiner for withdrawing the species election for Subgroups 1, 2 and 6-10 (Office Action at page 6). New claims 117-226 read on the elected species for Subgroups 3-5.

Objections to the Specification

The Examiner objects to the abstract "because it does not include the technical disclosure of the improvement" (Office Action at page 7). Applicants have amended the abstract to recite complete sentences. No new matter has been added. Applicants maintain that the abstract complies with the requirements of the MPEP.

The Examiner states that "Applicants' specification provides the wrong priority documents in the first paragraph of the specification" (Office Action at page 8). Applicants have corrected the first paragraph of the specification to recite the correct priority information, as listed on the Application Data Sheet filed on October 25, 2001, and respectfully request the Examiner withdraw this objection.

Objections to the Claims

The Examiner has objected to various claims, as follows. The new claims are not subject to these objections, rendering them moot.

A. The Examiner objects to claims 20 and 30-32 under 37 CFR 1.75(c) as being improper form "because they do not refer to other claims in the alternative only" (Office Action at page 8). The new dependent claims refer to other claims in the alternative only.

B. The Examiner objects to claims 21-29 under 37 CFR 1.75(c) as being improper form "because a multiple dependent claim depends from another multiple dependent claim" (Office Action at page 9). Applicants have presented new claims that remove any improper multiple dependencies.

C. The Examiner objects to claims 14, 19, 39-53, 63 and 115 "as containing non-elected subject matter" (Office Action at page 9). The new claims are directed to libraries, and the new claims fall within elected Group IV.

D. The Examiner objects to claims 19 and 39-52 as mistakenly using "the plural form of 'method' and 'library' instead of the grammatically correct singular form" (Office Action at page 9). Applicants have corrected this grammatical error in the new claims.

Rejections under 35 U.S.C. § 101

The Examiner rejects claims 19 and 39-53 "because the claim is directed more than one statutory class of inventions, i.e., 'methods or libraries'" (Office Action at page 9). As the new claims are directed to libraries, Applicants respectfully request this rejection be withdrawn.

Rejections under 35 U.S.C. § 112, second paragraph

The Examiner rejects claims 14-16, 19, 39-53, 63 and 115 as indefinite "for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention" (Office Action at page 10). Applicants respectfully disagree, as discussed below.

Claims 14-16, 63 and 115

According to the Examiner, claims 14-16, 63 and 115 lack antecedent bases for the phrase "the diversity of the family" (Office Action at page 11). The Examiner also states that

it is not clear how a library that "comprises a collection of members of a diverse family of peptides, polypeptide or proteins" could simultaneously comprise a "portion of the diversity of the family" because said library already comprises the "entire" diversity (i.e., the library can not simultaneously be composed of "all" and also some smaller "portion" of members). For example, if the library were drawn to just a "portion" of the members then it necessarily wouldn't contain "all" the members (Office Action at page 11).

Applicants have met the rejection, in part, by amending the claims to provide adequate antecedent basis for "the diversity of the family". However, Applicants respectfully disagree that the "library already comprises the 'entire' diversity". There is no requirement that the "collection of members of a family", as recited in the new claims, contain all of the members of the family. Merely for clarification purposes, Applicants have amended the claims to recite, in part, "a library comprising a collection of members of a family; the family comprising a diversity of peptides, polypeptides or proteins; the collection comprising at least a nonbiased portion of the diversity of the family...". One of ordinary skill in the art, reading the claims, would understand that the "collection" includes members of a family, but not necessarily all of the members of the family, and that the collection contains at least a nonbiased portion of the diversity present in the family. One of ordinary skill in the art would understand the metes and bounds of the claims. Accordingly, the claims are not indefinite, and Applicants respectfully request the Examiner withdraw this rejection.

Claims 14-16

The Examiner rejects claim 14 "as being incomplete for omitting essential steps, such omission amounting to a gap between the steps" (Office Action at page 11). Specifically, the Examiner states that "when claim 14 depends alternatively from claims 7 and 8, no 'expression' steps are recited that would produce the claimed library of peptides, polypeptides or proteins"

(Office Action at page 11). The subject matter of multiply dependent claim 14 (now canceled) is presented as new independent claims 117-120. Thus, this rejection is now moot.

Similarly, the Examiner rejects claims 15-16 for omitting an “‘expression’ step for producing the claimed diverse family of peptides, polypeptides or proteins” (Office Action at pages 11-12). Applicants respectfully disagree that an “expression step” is a necessary omitted step. The subject matter of claims 15 and 16 (now canceled) is presented as new claims 117 and 118, respectively. The preambles of claims 117 and 118 recite:

A library comprising a collection of members of a family; the family comprising a diversity of peptides, polypeptides or proteins; the collection comprising at least a nonbiased portion of the diversity of the family; and the peptides, polypeptides or proteins being encoded by DNA sequences comprising at least in part nucleic acid sequences produced by a method comprising the steps of:

The libraries covered by claims 117 and 118 contain peptides, polypeptides or proteins that are encoded by DNA sequences. The Examiner appears to require that the DNA sequences be expressed, as an affirmative step of the claims, to produce the encoded peptides, polypeptides or proteins. However, such an expression step is not required. It is perfectly clear that the peptides, polypeptides or proteins are encoded by DNA sequences and that the DNA sequences contain nucleic acid sequences prepared by affirmatively recited steps (i) and (ii). Accordingly, Applicants respectfully request that the Examiner withdraw this rejection.

Claim 115

The Examiner rejects claim 115 “as being incomplete for omitting essential steps” (Office Action at page 12). Although Applicants disagree, claim 115 has been canceled, and the subject matter of claim 115 does not appear in the new claims, rendering this rejection moot.

Claims 19 and 39-53

The Examiner rejects claims 19 and 39-53 as indefinite “because Applicants are claiming more than one statutory class of invention (i.e., ‘methods or libraries’)” (Office Action at

page 12). As all of the new claims are directed to libraries, this rejection is moot, and Applicants respectfully request the Examiner withdraw this rejection.

Claim 15

The Examiner rejects claim 15 as lacking antecedent basis for the limitation “the region in which cleavage is desired” (Office Action at page 13). The new claims recite, in part, “a region in which cleavage is desired...”, as suggested by the Examiner. Accordingly, Applicants respectfully request the rejection be withdrawn.

Claims 48 and 50

The Examiner rejects claims 48 and 50 as lacking antecedent basis for the limitation “the partially double-stranded oligonucleotide” in lines 2-3 (Office Action at page 13). The new claims are not subject to this rejection, and Applicants respectfully request this rejection be withdrawn.

Rejections under 35 U.S.C. § 102(b)/103(a)

The Examiner rejects claims 14-16, 19, 39-53, 63 and 115 as anticipated by or, in the alternative, as obvious over WO 94/07922 (“Burton”). Specifically, the Examiner states that

Burton et al. disclose a library comprising a collection of genetic packages that display a member of a diverse family of peptides, polypeptides or proteins and collectively display at least a portion of the diversity of the family... Although Burton et al. do not disclose that their libraries are formed by the same method steps as recited in claims 7-10, 60, 61, 101, 102, 104 or 113, the products of Burton et al. appear to be the same as those recited by the instant claims, regardless of their method of manufacture (e.g., see MPEP 2113). That is, both methods produce a library of diverse family of peptides, polypeptides or proteins that collectively display at least a portion of the diversity of the family (Office Action at pages 14-15).

Applicants respectfully disagree.

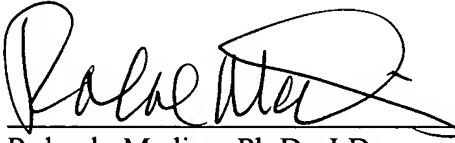
The libraries of Burton do not anticipate nor render obvious the claimed libraries. The method described in Burton utilizes amplification primers that are complementary to the “native”

DNA being used to make the library (*see, e.g.*, page 80, lines 13-18). Further, Burton's amplification primers hybridize to conserved sequences. Accordingly, the libraries produced by Burton's methods are biased towards sequences that contain conserved regions. The claimed libraries, in contrast, contain at least a nonbiased portion of the diversity of a family of peptides, polypeptides or proteins. Nothing in Burton teaches or suggests a library comprising at least a nonbiased portion of the diversity of a family, as presently claimed. Thus, the new claims are not anticipated, nor rendered obvious, by Burton, and Applicants respectfully request the Examiner withdraw this rejection.

Enclosed is a Petition for Extension of Time along with the required fee. Please apply any other charges or credits to deposit account 06-1050, referencing Attorney's Docket No. 10280-140003.

Respectfully submitted,

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